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Aerial Seeding Project 1992 Operations Plan

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United States
Department of
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Forest Service
Intermountain
Region

United States
Department of
Agriculture



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1992 BOISE N.F. AERIAL SEEDING PROJECT

PREFACE

This project is intended to provide project managers and members an operational background to enhance project effectiveness. The Project Plan is not intended to be a part or replacement of any other document.

The implementation will include aerial application of 2 different mixes of grass and legume seed on the Foothills fire for a total of approximately 91,000 acres.

On the Foothills fire there will be construction of structural hay bale dams and log sills.

Boise National Forest

Foothills fire aerial seeding project

1992

Baer headquarters

Boise National Forest
Supervisors office
1750 Front Street
Boise, ID 83702
208-364-4100

Baer Office

208-364-4130
208-364-4137

Aerial Seeding Project Office

208-334-1258
208-334-1259

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 Bennett, Deanna _____ 4116
 Bennett, Marilyn _____ 4179
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 Beveridge, Ron _____ 4168
 Bridges, Fay _____ 4108
 Bryant, Paul _____ 4234
 Burnett, Nancy _____ 4115
 Burton, Tim _____ 4210

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 Charlton, Betty _____ 4150
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 Foothills Rehab _____ 4430
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 Frost, Joe _____ 4203
 Fuller, Don _____ 4178

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 Hernandez, Alfredo _____ 4167
 Hill, Ediel _____ 4128
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 McDonnell, Irene _____ 4109
 Mealey, Steve _____ 4102
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Randall, Clint _____ 4140
 Reed, Will _____ 4158
 Ririe, Warren _____ 4151

Sanchez, Adriana _____ 4187
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 Scott, Linda _____ 4121
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 Spillera, Linda _____ 4252
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 Stager, Betty _____ 4124
 Stark, Travis _____ 4283
 Steger, John _____ 4142
 Stern, Barry _____ 4171
 Stron, Bert _____ 4177

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 Wallace, Ray _____ 4135
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 Hoffman, Jim _____ 4221
 Knapp, Andy _____ 4222
 Moxellini, Phil _____ 4223
 Roberts, Joy _____ 4224
 Shorthouse, Janet _____ 4220
 Stolz, Sara _____ 4223
 Thier, Ralph _____ 4225
 Weatherby, Julie _____ 4226
 Williams, Ralph _____ 4227

WAREHOUSE BUILDING, 1918 Commerce St.

Warehouse - 334-1599 or SPEED _____ 7994
 Dispatch - 334-9800 or SPEED _____ 7998
 FAX _____ 334-1572
 Radio Shop _____ 4219
 Road Crew _____ 4218

MISCELLANEOUS

Hells Canyon NRA _____ 8-503-426-3151
 Dolse City Forestry _____ 384-4085
 Fish & Game (Walnut St.) _____ 334-3700
 Redfish Lake Lodge _____ 8-208-774-3536
 State Parks & Recreation _____ 327-7444
 Yellowstone Nat'l Park _____ 8-585-0011

GSA FLEET MANAGEMENT CENTER

Light equipment repair _____ 334-1264
 Heavy equipment repair _____ 334-9113/9114

EEO COUNSELOR

Vacant _____

BOISE NATIONAL FOREST RANGER DISTRICTS

D -- 1, MOUNTAIN HOME, Larry Tripp, Ranger
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 Mountain Home, ID 83647
 SPEED DIAL _____ 7101
 FAX _____ 4311
 364-4310 or 8-208-587-7961

D -- 2, BOISE, Don Peterson, Ranger
 5493 Warm Springs Avenue
 Boise, ID 83712
 SPEED DIAL _____ 7102
 FAX _____ 364-4243
 364-4241/4242 or 8-208-364-4241/42

D -- 3, IDAHO CITY, Kathy Lucich, Ranger
 P.O. Box 129
 Idaho City, ID 83631
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 FAX _____ 392-6684
 364-4330 or 8-208-364-4330

D -- 4, CASCADE, Ronn Julian, Ranger
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 364-4270 or 8-208-382-4271/72

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 364-4250 or 8-208-259-3361

D -- 6, EMMETT, Duane Butler, Ranger
 1805 Highway 16, Room 5
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 364-4260 or 8-208-365-4382/3811
 GARDEN VALLEY _____ 8-208-462-3241

LUCKY PEAK NURSERY, Dick Thatcher
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 343-1977

NATIONAL FORESTS

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 CHALLIS _____ 8-208-879-2285
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 PAYETTE _____ 8-208-634-0700
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 NEZPERCE _____ 8-208-983-1950
 SALMON _____ 8-208-756-2215
 SAWTOOTH _____ 8-208-737-3200
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316 East Myrtle Dolse, ID
 SPEED DIAL _____ 7957
 BIFC (3905 Vista) DLM Info _____ 389-2512
 BIFC-FS (Director) _____ 389-2604
 BIFC, TRAINING BUILDING _____ 389-2561
 AIR TANKER BASE _____ 389-2664
 HELITACK CREW _____ 334-9854
 HOT SPOTS _____ 8-208-462-3241
 SCALERS, Horseshoe Bend _____ 8-208-382-3392
 Cascade _____ 8-208-793-2563

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Dial 8 + 208 + 7-digit number

The project manager will advise team members of safety concerns during the project. Safety concerns will be discussed with the project manager and the project manager will be responsible for ensuring that all safety concerns are addressed. The project manager will also be responsible for ensuring that all safety concerns are addressed in a timely manner.

It is the policy of the project manager to ensure that all safety concerns are addressed in a timely manner. The project manager will be responsible for ensuring that all safety concerns are addressed in a timely manner.

2. SAFETY PLAN

The safety plan is a document that outlines the safety concerns of the project. It is a document that outlines the safety concerns of the project. It is a document that outlines the safety concerns of the project. It is a document that outlines the safety concerns of the project.

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The project operations manager will advise team members of hazards occurring during the project, identify means to minimize them, and identify ways to minimize risks involved. Any safety deficiencies will be corrected through the coordination efforts of the project staff. Project staff will emphasize prevention of accidents and identify solutions to safety problems.

SAFETY IS PART OF EVERYONE'S JOB RESPONSIBILITY REGARDLESS OF POSITION WITHIN THE ORGANIZATION.

I. POLICY

The safety and health of all personnel is of major importance. Therefore, project management has accepted the responsibility of preventing accidents in order that each employee may work in a safe and healthy environment each day without injury, illness or financial loss.

Injuries are disturbing, and costly to individuals, their families, and the various agencies involved in this project. Consequently, project management has instituted a policy to promote safe practices to eliminate accidents and unsafe conditions.

An organized accident prevention program has been established to develop safety through awareness training, project planning and design, and supervision. Training is provided to give employees the knowledge and benefits of safe practices both on and off the job. Project planning and design is utilized to provide the safest possible environment for all. The supervisor is responsible for reviewing daily safety procedures and to see that safety procedures are followed.

Some of the major points of our safety program require that:

1. All injuries and accidents be reported immediately to the appropriate supervisor.

2. Personal protective equipment, where required, must be worn by all employees.
3. Hazardous situations and other safety concerns must be reported immediately to the appropriate supervisor and information passed on to the Project Manager.
4. Each employee shall comply with occupational safety and health standards, rules, regulations, orders and directives issued by their employer and must take responsibility for their own actions and conduct.

Members of this project have the responsibility for their own safety, as well as the safety of their fellow team members. Only by each employee becoming familiar with the hazards of their job and doing what is necessary to insure safe practices, will the project achieve the safe working conditions deserved by all its employees.

Finally, each employee has an important role in this safety program. That role is to strive for production and efficiency without accidents. Everyone is expected to work together to make this a successful, accident-free and healthy project.

GOALS

- A. Prevent accidents and protect the safety and health of all project employees on and off the job.
- B. Prevent property damage during the project.
- C. Maintain an efficient project with high safety standards.

OBJECTIVES

The objectives of this safety program are to establish and maintain a positive safety atmosphere which will:

- A. Stress the importance of a positive safety attitude and safe work practices on the part of all project personnel and recognize that all project personnel are part of the safety program.
- B. Prevent accidents both on and off the project.
- C. Maintain safety standards that meet or exceed requirements of the various agencies involved in the project.
- D. Establish and maintain positive inspection and investigation procedures.

- E. Maintain records of all incidents on the project and prepare statistical information for project supervisors as part of an ongoing monitoring process. Prepare a summary report at the completion of the project.
- F. Encourage open communications between project employees, contract employees, and incident command organization.

RESPONSIBILITY

The project manager has the ultimate responsibility for all activities during the project. This responsibility is assigned to various project supervisors throughout the organization. Safety is part of everyones job.

Work supervisors are responsible for implementing the project safety plan by providing supervision, leadership, organization, and evaluating employees on their safety performance.

It is the responsibility of all supervisors to promote a positive safety climate. Likewise, it is the responsibility of all employees to perform their work in a safe manner.

PROCEDURES

A. Accident prevention

1. Orientation and Training

- A. All project personnel will receive orientation and training to accomplish their job function.
- B. When appropriate, project personnel may be required to take a helicopter orientation class.
- C. All project personnel will participate in a preapplication orientation prior to project initiation.
- D. Application Equipment Managers will train team members to recognize job hazards on an ongoing basis.
- E. Application Equipment Managers are required to hold tailgate safety meetings as a regular part of their daily activities. These briefings are to be documented and submitted to the Operations Chief.

2. Personnel Protective Equipment

- a. Project personnel, when exposed to hazardous operations during this project, must wear protective equipment. Supervisors are responsible to identify hazards and insure that employees wear their personal protective equipment.
- b. Personal protective equipment may include the following: aviation helmet; hard hat with chin strap; goggles for eye protection; safety glasses; fire resistant clothing (e.g., nomex jumpsuits); long sleeve shirt and long trousers; ear plugs or ear muffs; head lamps or flash lights; individual first-aid kits; and high visibility vests around operating aircrafts.
- c. Application Equipment Managers are responsible to see that team members have the right type of protective equipment and that personnel wear their protective equipment.

3. Hazard Inspections

- a. The Incident Safety Officer and Project manager will periodically inspect and monitor all application operations.
- b. All temporary facilities such as, heliports, storage areas, and other bases of operation will be monitored for safety hazards. Hazards will be documented and corrective action taken.
- c. Safety hazards identified during safety inspections will be communicated to the appropriate supervisor prior to the end of the daily work shift.
- d. Identified hazards will be corrected immediately by appropriate measures. Appropriate measures may include, removal of the hazard, signing, repair of building or equipment, replacement of defective equipment, closure of an area until the hazard can be eliminated, or training to minimize the risk of a particular hazard to an acceptable level. The Incident Safety Officer/ or Project Manager will assist supervisors in risk reduction and hazard management.

4. Air Operations Safety

- a. All operations will meet or exceed Forest Service standards.
- b. Helicopter operations during this project are complex and hazardous. Exhibit 1 provides a general list of safety precautions.
- c. Helicopter checklist will be completed daily.

5. Vehicle Safety

- a. Drivers are responsible for maintenance and safe operation of their assigned vehicle.
- b. Drivers should have completed a course on defensive driving, carry a current State issued drivers license as well as a government driver's license, if applicable.
- c. Drivers shall check their vehicles daily. Such checks should include, braking system, steering mechanism, tires, lights, wipers, horn, battery, fluid levels, and exhaust system. Each vehicle shall carry a fire extinguisher and first aid kit.
- d. Exhibit 2 provides a general list of safety precautions for operations of motor vehicles.

6. Personnel and Visitor Safety

- a. Visitors to project sites must check in with the Incident Command Organization. Visitors to the project shall not jeopardize the safety or efficiency of project personnel.

7. Traffic Control and Road Closures

- a. Any traffic control operations will be coordinated through incident law enforcement officers and ICP.

8. First Aid Attendants

- a. Individual first-aid kits will be provided to individuals on the project. Larger kits will be carried in vehicles and will be present at all heliport operations.
- b. Request EMT assistance through ICP.

9. Safety meetings

- a. Safety meetings are recognized as an important part of the project. Regular meetings of the project staff will discuss accidents that may have occurred, unsafe conditions, preventative actions, etc. These meetings will provide information for the Incident Commander and safety officer. Tailgate meetings will be documented and kept on file with the project staff.
- b. Daily safety meetings (tailgate sessions) will be required of all field operations. The meetings should be documented via the minutes of crew meeting report, which are Available from the Incident Safety Officer.
- c. Before starting new procedures or entering hazardous situations, supervisors shall review appropriate safety conditions with their team members. These discussions will occur as frequently as necessary and could be on a daily or hourly basis.

B. Accident Reporting and Emergencies

1. Forms and Guidelines

- a. All accidents resulting in equipment or property damage or personal injuries shall be reported to the supervisor in charge of the activity. When an accident results in a personal injury, immediate first aid will be rendered. For non-serious injuries, involving first aid only, the accident will be properly documented.
- b. All compensable injuries requiring medical assistance must receive prompt attention.
- c. The project manager will assist supervisors in completing all reports and records of a personal injury, accident or property damage. If additional assistance is needed, requests will be coordinated through incident command.
- d. Submit accident documentation in a timely manner.
- e. If an employee is absent from the project as a result of injury, replacement or reassignment will be coordinated through Incident Command.
- f. All forms and records, will be turned over to the Boise National Forest following completion of this project.

2. Emergency Medical Plan

- a. An emergency medical plan will be posted by the Safety Officer ICP and Medical headquarters. See Boise N.F. Aircraft Crash/Search and Rescue Guides.
- b. In the event of an emergency, notify ICP immediately. Request the Safety Officer to assist in on-site coordination.
- c. For emergency rescue situations, refer to Boise N.F. Aircraft Crash/Search and Rescue Guide.

3. Accident Investigation

- a. In all cases of vehicle or personal injury accidents, notify ICP. In assistance where property is damaged, (not belonging to the project), also notify ICP.
- b. All Accidents will be investigated. The level of the investigation will vary from a few brief sentences to an in-depth analysis depending on the severity of the accident.

4. Search and Rescue

In the event an aircraft is downed, missing or if a serious accident occurs, the following personnel will initiate the listed action:

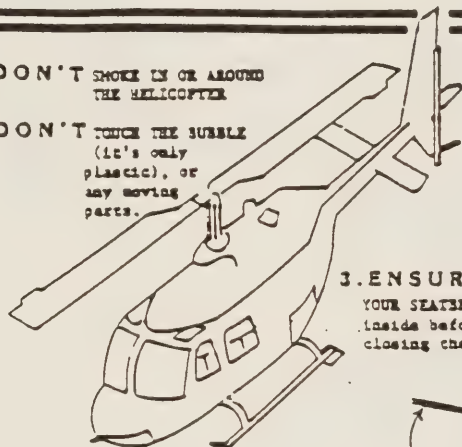
- a. Application Team Leader (of the affected team)
 - 1) Follow up directions for the type of incident as outlined in the Boise NF Aircraft Crash/Search and Rescue Guide. Notify ICP.
 - 2) Follow directions on the incident flowchart.
- b. Forest Dispatcher
 - 1) Receive the report and record all pertinent information (see Search and Rescue Report Form as an example of information needed, SUDS R-4 1590, Exhibit 9).

BE ALERT AND AROUND THE HELICOPTER

LIVE

1. DON'T SMOKE IN OR AROUND THE HELICOPTER

2. DON'T TOUCH THE BUBBLE
(It's only plastic), or any moving parts.



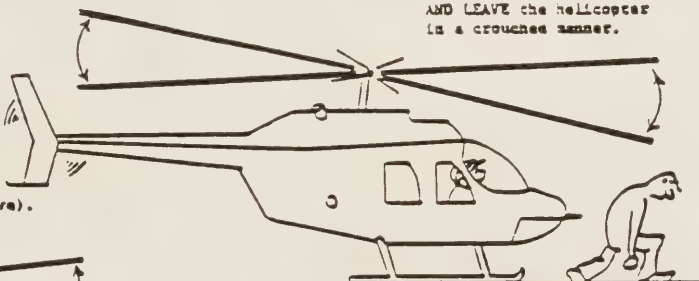
3. ENSURE YOUR SEATBELT is inside before closing the door.

8. PROTECT YOURSELF

- FASTEN SEATBELT** ON ENTERING helicopter and leave it fastened until the pilot signals to get out.
- ASK THE PILOT** about emergency exits and escape procedures.
- DRESS** for the operating environment.
- KEEP WELL CLEAR** of landing or taking off, especially with external loads.
- SHIELD YOUR EYES** near a helicopter when it is landing or taking off.
- FRONT PASSENGER** will unload other passengers at an unobstructed spot.

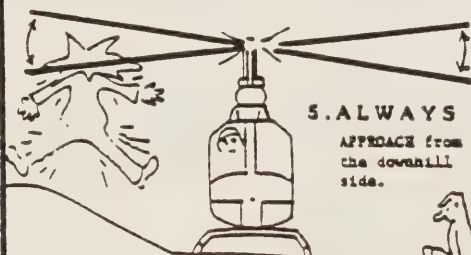
9. APPROACH

AND LEAVE the helicopter in a crouched manner.



4. NEVER

APPROACH OR LEAVE UPHILL (Rotor blades are expensive).

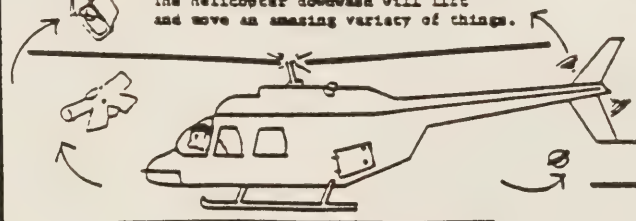


5. ALWAYS

APPROACH from the downhill side.

6. KEEP

THE LANDING AREA CLEAN. The helicopter downwash will lift and move an amazing variety of things.



7. DON'T

SLAM THE DOORS. but close them gently and don't let them swing in the wind.



10. WHEN DIRECTING THE HELICOPTER, stand with your back to the wind, arms outstretched in the direction of the pad.



11. ALWAYS AVOID THIS BLIND AREA. THE PILOT CAN'T SEE YOU.

HE CAN'T SEE YOU HERE EITHER.

DON'T EVEN GET CLOSE TO THE TAIL ROTOR!

12. NEVER

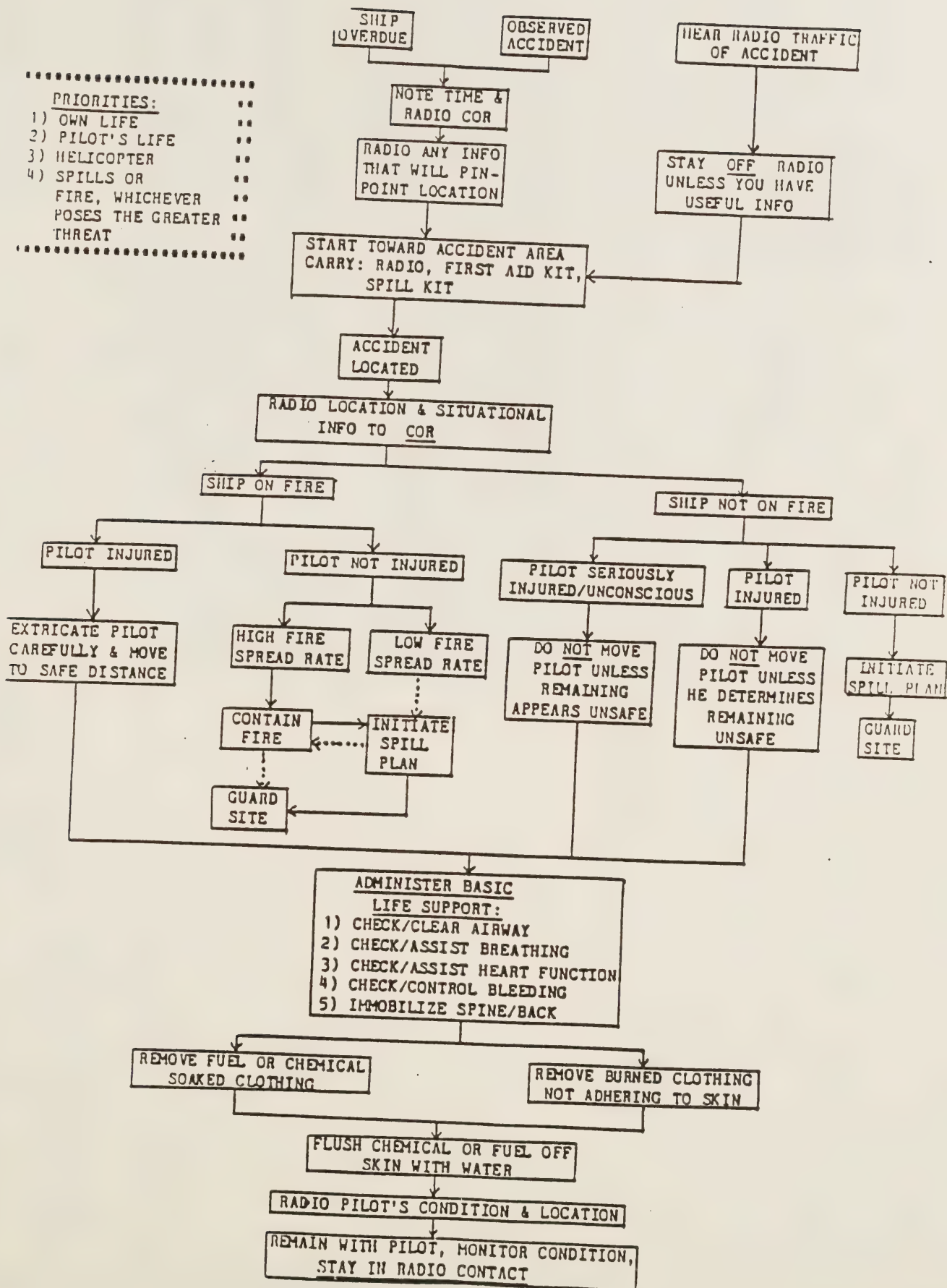
THROW any object in the vicinity of the helicopter.



13. CARRY TOOLS and other long objects horizontally below waist level, not upright or over shoulder.

14. HOLD ON TO YOUR HAT!

-
PRIORITIES: ..
 1) OWN LIFE ..
 2) PILOT'S LIFE ..
 3) HELICOPTER ..
 4) SPILLS OR ..
 FIRE, WHICHEVER ..
 POSES THE GREATER ..
 THREAT ..



USDA - Forest Service	1. Identify Job or Project to be Analyzed <i>AERIAL SEEDING</i>	2. Location <i>FOOTHILLS FIRE</i>	3. Unit <i>BOISE NATIONAL FOREST</i>
JOB HAZARD ANALYSIS	4. Name of Analyst	5. Job Title of Analyst	6. Date Prepared
7. Hazards		8. Actions to Eliminate Hazards	
1) Lost or Injured and Survival	<p>A. If lost, keep calm, don't panic. Select a warm shelter. Shelter, warmth and liquids are much more important than food. Select sheltered spot and prepare camp, shelter and firewood well before dark. Check the surrounding country and attempt to orient yourself. Do not walk aimlessly. Carry trust in the map and compass. If you can reach a road, trail or telephone line, follow it until you can determine you are moving in the right direction. As a last resort, travel downhill parallel to a stream or drainage. If unsuccessful in attempts to find your way, stay in one place, conserve your strength and build a fire in a safe place so that smoke may be seen by searchers. If signal mirror or portable radio is available, have ready for immediate use.</p> <p>B. If injured while in the woods on foot, follow the same guidelines for being lost, except provide first aid as best you can, make yourself as comfortable as possible. If you have a radio, report to your supervisor or to headquarters your location and wait for assistance. If you know where you are and can walk to a road or location to be picked up, do so. Keep calm and don't panic. Conserve your energy, if you plan to walk or move location do it slowly. If you have checked out before your trip giving your location and expected time of return, you can be sure that someone will be looking for you. If no one knows your location or the time you planned to return, it will take longer to get a search started and much longer to locate you on the ground. Always let someone know where you will be for the day and the time you plan to return.</p>		
9. Approved By	10. Title	11. Date	FS-6700-7(1/86)

USDA - Forest Service	1. Identify Job or Project to be Analyzed <i>AERIAL SEEDING</i>	2. Location <i>FOOTHILLS FIRE</i>	3. Unit <i>BOISE NATIONAL FOREST</i>
JOB HAZARD ANALYSIS	4. Name of Analyst	5. Job Title of Analyst	6. Date Prepared
7. Hazards		8. Actions to Eliminate Hazards	
1) Aircraft Fuel		<p>A. Fire or Explosion: Flammable/combustible material; may be ignited by heat, sparks or flames. Vapors may travel to a source of ignition and flash back. Container may explode in heat of fire. Vapor explosion hazards are both inside and outside the aircraft.</p> <p>B. Health Hazards: May be poisonous if inhaled or absorbed through skin. Vapors may cause dizziness or suffocation. Contact may irritate or burn skin and eyes. Fire may produce irritating or poisonous gases. Runoff from fire control or dilution water may cause pollution.</p> <p>C. Emergency Action: Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Isolate for 1/2 mile in all directions of truck involved in fire. FOR EMERGENCY ASSISTANCE CALL CHEMTREC (800-424-9300 check w/Steve) If water pollution occurs, notify appropriate authorities.</p> <p>D. Fire: Small fires; dry chemical, CO2, water spray or foam. Large fires; Water spray, log or foam. Move container from fire area if you can do so without risk. Cool containers that are exposed to flames with water from the side until well after fire is out. For massive fire in cargo area, use unmanned hose holder or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire.</p> <p>E. Spill or Leak: Shut off ignition sources: no flares, smoking or flames in hazard area. Stop leak if you can do it without risk. Use water spray to reduce vapors. Small spill: Take up with sand or other noncombustible absorbent material and place into containers for later disposal. Large spill: Dike far ahead of spill for later disposal.</p> <p>F. First Aid: Move victim to fresh air; call emergency medical care. If not breathing, give artificial respiration. If breathing is difficult, give oxygen, if available. In case of contact with material, immediately flush eyes with running water for at least 15 min. Wash skin with soap and water. Remove and isolate contaminated clothing and shoes at the site.</p>	
9. Approved By	10. Title	11. Date	FS-6700-7(1/86)

USDA - Forest Service	1. Identify Job or Project to be Analyzed <i>AERIAL SEEDING</i>	2. Location <i>FOOTHILLS FIRE</i>	3. Unit <i>BOISE NATIONAL FOREST</i>
JOB HAZARD ANALYSIS	4. Name of Analyst	5. Job Title of Analyst	6. Date Prepared
7. Hazards			
1) Vehicle Driving	8. Actions to Eliminate Hazards		
	<p>A. All drivers will be trained and licensed before being permitted to drive. Supervisors should ride with inexperienced drivers.</p> <p>B. Drive slowly. The only way a driver can reduce impact or increase reaction time is to drive slowly. Drive at a speed that permits full control of the vehicle. Use compression and gravity to slow the vehicle going up hill and compression and low gear ratios going downhill. If you have to ride the brakes, you are in the wrong gear.</p> <p>C. Driver and passengers shall fasten seat belts before vehicle is put into motion.</p> <p>D. Drive on the right side of the road. Keep alert to the multiple hazards of the road. This means keeping conversation to a minimum and eliminating distractions. Proper rest is the key to alertness.</p> <p>E. Drive with headlights on at all times. Keep window, mirrors, headlights and taillights clean even if it means making an unscheduled stop. Sound your horn on blind corners.</p> <p>F. Allow proper following distances in dusty conditions or when visibility is limited. Animals can be expected on all sections of the project. Livestock will be most active during the day while deer and elk will be out at night. It is important that you keep watch at all times.</p> <p>G. Park vehicle in location that does not impede traffic flows. Try to park in a spot where the vehicle does not have to be backed up. If in doubt about the selected parking spot, get out and walk through it. Look for holes, rocks or other debris that could damage tires or undercarriage. If there is any slope to the ground, check the tires. Before getting into the vehicle, walk around it to see that there are no obstructions. Never make a U-turn at blind corners or back up or into traffic without a guide. When turning around, select a wide spot with a view of at least 500 feet in each direction. Back rear of vehicle toward the cutbank. Do not put the front wheels too far out on the fill slope edge of the road.</p>		
	(CONT)		

H. Avoid driving continuously for more than 2 hours. Pull off the road for a short rest if you experience any of the warning signals, (1) vehicle too warm, (2) muscular tension, (3) eye strain, (4) restlessness; rubbing face, neck or arms, or inability to get comfortable, (5) inattention, daydreaming, (6) irritable, (7) hallucinations, (8) drowsiness and (9) feeling that it is "OK" to close eyes for just a second.

I. Check the condition (safety) of the vehicle daily.

9. Approved By

10. Title

11. Date

USDA - Forest Service	1. Identify Job or Project to be Analyzed <i>AERIAL SEEDING</i>	2. Location <i>FOOTHILLS FIRE</i>	3. Unit <i>BOISE NATIONAL FOREST</i>
JOB HAZARD ANALYSIS	4. Name of Analyst	5. Job Title of Analyst	6. Date Prepared
7. Hazards		8. Actions to Eliminate Hazards	
1) Heliport/Helispots		A. Inspect sites before and after construction.	
		B. Identify all hazards before allowing aircraft to land or take off.	
		C. Post landing pads and flight paths.	
		D. Establish safety zones and post locations.	
		E. Design a heliport/helisport flight pattern identifying landing and take off procedures.	
		F. Provide dust abatement.	
		G. Develop travel routes, both foot and vehicle.	
		H. Develop fueling and aircraft loading procedures.	
		I. Establish vehicle parking area.	
		J. Provide rest area for pilots away from dust and noise (preferable in a shady area).	
		K. Put up wind sock or other methods of determining the wind direction.	
		L. The felling of trees to improve or make the heliport/helisport safer will be done only by a qualified and certified feller. If the felling job appears or should become a big or complex task, consider contracting.	
9. Approved By	10. Title	11. Date	

USDA - Forest Service	1. Identify Job or Project to be Analyzed <i>AERIAL SEEDING</i>	2. Location <i>FOOTHILLS FIRE</i>	3. Unit <i>BOISE NATIONAL FOREST</i>
JOB HAZARD ANALYSIS	4. Name of Analyst	5. Job Title of Analyst	6. Date Prepared
7. Hazards		8. Actions to Eliminate Hazards	
1) Aircraft Crash/Accident		A. All passengers and pilots wear approved safety equipment (helmet, nomex clothes, leather boots, gloves, etc.).	
		B. Carry personal survival gear (heavy coat, matches, compass, knife, rations, signal mirror, emergency ground-to-air markers, etc.).	
		C. Know where the fire extinguisher and first aid kit are located in the aircraft.	
		D. Know how to operate the ELT.	
		E. Know how to operate the aircraft radios.	
9. Approved By	10. Title	11. Date	

USDA - Forest Service	1. Identify Job or Project to be Analyzed <i>AERIAL SEEDING</i>	2. Location <i>FOOTHILLS FIRE</i>	3. Unit <i>BOISE NATIONAL FOREST</i>
JOB HAZARD ANALYSIS	4. Name of Analyst	5. Job Title of Analyst	6. Date Prepared
7. Hazards		8. Actions to Eliminate Hazards	
1) Low Flying Helicopters		A. Helicopters complete daily pre-flight inspections.	
		B. When the opportunity lends itself to the situation, fly at a higher elevation.	
		C. Work with the pilot to identify hazards that may not be identified on the flight hazard map.	
		D. Do not allow flying of aircraft if there is a question of the pilots ability to complete the mission or if there is a suspected mechanical problem with the aircraft.	
		E. Maintain a forward speed.	
		F. Complete load calculations before starting the mission or if there is a change in passengers or cargo.	
		G. Passengers minimize conversation and distraction with the pilot so that total concentration can be maintained.	
		H. Maintain timely pilot rest periods.	
		I. Maintain safe distance between flying aircraft.	
		J. Do not fly during poor visibility.	
		K. Do a high recon before low level flights.	
9. Approved By	10. Title	11. Date	

USDA - Forest Service	1. Identify Job or Project to be Analyzed <i>AERIAL SEEDING</i>	2. Location <i>FOOTHILLS FIRE</i>	3. Unit <i>BOISE NATIONAL FOREST</i>
JOB HAZARD ANALYSIS	4. Name of Analyst	5. Job Title of Analyst	6. Date Prepared
7. Hazards		8. Actions to Eliminate Hazards	
1) Poor Communication in Remote Areas	A. Each employee will sign out at the beginning of the day. Information will include: name, vehicle no., work location by block no.'s, estimated time of arrival back at duty station.		
	B. Radios will be signed out and checked and supplied with spare batteries.		
	C. Employees will radio in their ETA if they anticipate late arrival at the duty station. If communication is not possible, they will return on time.		
	D. Base will immediately attempt radio contact with employees not at base when expected.		
	E. If contact has not been made by radio within two hours of the employee's ETA at base, a physical search will commence.		
9. Approved By	10. Title	11. Date	

TAILGATE SAFETY MEETING

Instructions:

To be completed by first line supervisor or work leader at the worksite prior to beginning the job and when the hazards change due to a change in worksite location or other conditions. Add any hazards that do not appear on the 6700-7. Reference Health and Safety Code Handbook (FSH 6709.11) to help identify recommended work procedures and protective equipment.

Study/Project/Job _____ Work Leader/Supervisor _____

Describe Work: _____

IDENTIFY & LIST HAZARDS

DISCUSS HAZARD REDUCING WORK PROCEDURES

NAMES OF PEOPLE ATTENDING

Protective Equipment Required by the Job Hazard Analysis

Additional Protective Equipment Needed: _____

Date Tailgate Safety Meeting was held _____

Turn this form into the Incident Commander or the Safety Officer.

Signature of Work Supervisor _____
Date _____

IC _____
SO _____
STAFF _____

VEHICLE SAFETY CHECK LIST

Name of Inspector	Vehicle ID No.	Speedometer Reading	Date

1. Last Lube.....Speedometer reading_____
2. Last Oil Change.....Speedometer reading_____
3. First Aid Kit clean, serviceable.....
4. Mirrors serviceable and tight in brackets.....
5. Glass clear and window operational.....
6. Windshield wipers, washers, defroster operational.....
7. Driver's floor clear, tool boxes anchored.....
8. Lights, horn, dash warning lights operational.....
9. Back-up alarm (if applicable).....
10. Hood latch and safety catch working properly.....
11. Radiator cap, core and hoses serviceable.....
12. Battery snug, clean and with adequate fluid.....
13. Oil-Engine clean and at operating level.....
14. Oil-Auto-Transmission and power steering.....
15. All drive belts tight and serviceable.....
16. Steering system operational.....
17. Springs and shock absorbers in good condition.....
18. Leaks - exhaust, brakes, fuel lines, cooling.....
19. Tires properly inflated and in good condition.....
20. Doors, fenders, bumpers, body, and trailer ball tight-serviceable..
21. Accessories mounted and operable-spare tire, jack, tire chains, etc
22. Brakes (foot and parking) effective.....
23. Speedometer and odometer operating properly.....
24. Clutch operational.....
25. Seats, cushions, seat belts, track operational.....
26. Vehicle handling acceptable.....

REMARKS:

UNSATISFACTORY ITEMS CORRECTED:

BY: _____

DATE: _____

OPERATIONS

IV. OPERATIONS

A. PRE-APPLICATION

1. Helispot locations will be based on on-the-ground visual inspections. Seed block boundaries are designated using the following criteria:

- a. Draws and streams.
- b. Ridge lines.
- c. Roads, fencelines.
- d. Property boundaries.

Helispots will be selected so they are:

- a. As close to, or within, the blocks to be seeded if possible.
- b. Large enough to handle all aircraft, support equipment, seed, and personnel.
- c. Within safety limits.
- d. Accessible to all ground transportation.

Helispot locations will be delivered to the project cartographer for map preparation.

The project staff will provide all training necessary for accomplishing project objectives. Training includes:

- a. Helicopter safety.
- b. Contract administration.
- c. Project orientation.

The project staff will be responsible for making application aircraft inspections and checking pilot certifications. They will inspect and test all seed delivery systems on each application aircraft and methods used for tracking and measuring loads. Equipment files will be maintained throughout the project for all equipment used.

The project staff will be responsible for checking calibration and characterization of each application aircraft. Calibration of a seed delivery system is the adjusting of one or more of several factors so the proper amount of seed mix is applied per unit of area. First, the desired rate of spread and other factors that can affect actual rate of spread must be known. Variable factors are:

- a. Discharge time.
- b. Application speed.
- c. Swath width.

Rate of spread

Rate of spread is a contract requirement and is usually expressed as pounds of seed properly applied per acre. Rate of spread is prescribed, monitored, and inspected as the desired number of each seed species per square foot.

Discharge time

Discharge time is the amount of time required for the delivery system to discharge a known quantity of seed.

Application speed

Application speed is the forward airspeed of the aircraft while seed is being applied, with all other factors being equal, the faster and aircraft is traveling, fewer seeds per square foot will be applied.

Effective swath width

Effective swath width is the width of the area covered at the desired rate of spread under a single pass of an application aircraft. Effective swath width is determined by observing the amount of seed deposited along a line of deposit cards placed perpendicular to the flightline of an application aircraft. This process is called CHARACTERIZATION.

A. Calibration calculation

A helicopter seed system can be calibrated on the ground using the following formula:

$$\text{Acres per minute} = \frac{2 \times \text{swath width} \times \text{miles per hour}}{1000}$$

When: Swath width equals the simulated adequate application width from the given helicopter and its seed configuration.

Example: Determine the acres per minute for a helicopter flying 50 mph with a 30-foot effective swath.

If 18 pounds of seed are to be applied per acre: the flow rate should be calibrated to disperse seed at the rate of $18 \times 3 = 54$ pounds/seed per minute (rate of spread).

b. Adjusting Calibration

1. If the rate of spread is more than calculated:
 - a. Check seed hopper plunger opening for correct setting.
2. If the rate of spread is less than calculated:
 - a. Check seed hopper plunger opening for correct setting.
3. Proper calibration should normally be obtained in three or less attempts. If more than three trials are required and results are erratic, the following possibilities should be investigated:

a. Hydraulic plunger system defective.

b. Check seal around plunger, make sure it is seated and in place.

NOTE: If under either condition, the rate of spread is erratic, check to see if bridging has occurred in the plunger opening. (Bridging is the interlocking of seed).

The rate of spread is now fixed, and ready for field seed application.

c. Check calibration in Air

When an aircraft has been calibrated, the airspeed, height of flight, and effective swath widths are fixed. Applications must be made at the same settings.

The seed system calibration should be checked as soon as possible after obtaining acceptable air calibration, and daily thereafter. This can be accomplished by using the field check inspection seed cards placed in each sub-item. AEM and ground inspectors will check the calibration of each assigned seed helicopter daily.

d. Swath Pattern Tests

With rate of spread established, the swath pattern should be checked to see that distribution across the swath is as uniform as possible.

This is accomplished at the same time characterization occurs (see characterization section for procedure).

e. Characterization

Characterization is the evaluation of the seed distribution (per square foot) deposited from the aircraft.

This is accomplished through the following procedures:

- (1) Calibrate the aircraft for swath width.
- (2) Layout seed inspection cards at intervals of 10 feet perpendicular to wind direction.
- (3) Mark center line and start a smoke bomb.
- (4) Aircraft flies into wind across card line, speed is fixed at 50 mph by contract specifications.

- (5) After a few minutes, the cards are picked up and read. They can be picked up after the day's activities if conditions warrant.

B. DURING SEED OPERATIONS

The project staff, will issue a daily seeding plan which will contain complete instructions for every phase of each day's seeding operation. During the course of the seed operation, this information will be relayed to ICP on a daily basis. Operations of a typical seed day, following the issuance of a daily seed plan, can be described in the following manner:

TYPICAL SEED DAY

1. One to two hours before sunrise -
 - a. Ground inspector in assigned block Monitor weather and report to Application Equipment Managers.
One hour before sunrise -
 - a. Project Manager/Ops Chief at office or in field with crews as needed.
 - b. Application Equipment Managers
 - (1) Checks radio communication with ICP and ground inspectors.
 - (2) Record weather data.
 - (3) Determine if weather conditions are adequate.
 - (4) Visually check application equipment.
 - (5) Make necessary security and safety needs on heliport (brief personnel at heliport about safety - put up barriers, etc., as needed).
 - (6) Prepare necessary forms for the day's operations.
 - (7) Assemble necessary safety equipment.

3. Thirty-five minutes before sunrise -
 - a. Application Equipment Manager
 - (1) Check radio communication.
 - (2) Re-check everything before a final "GO" decision for the day.
 - b. Ground Inspector

All cards in place and either standing by for field observation or working on blocks to be seeded later that day.
4. During Seed Operations
 - a. Project Manager/Ops chief.
 - b. Application Equipment Manager - at heliport.
 - (1) Heliport Safety.
 - (2) Record necessary radio communications.
 - (3) Records seed mix, unit/area; and pounds loaded on each seeding helicopter.
 - (4) Record take-off and landing of each flight.
 - (5) Record block weather that is called in.
 - (6) Oversee all personnel on heliport other than contractor personnel.
5. After seeding operations are over for the day.
 - a. Project Manager/Ops chief (at office).
 - (1) Gather information on blocks seeded (pounds of seed mix/block) (acres/block).
 - (2) Insure block information is posted and Incident Commander is notified of progress and next day projection. Submit next day plan to ICP.
 - (3) Meet with contractors representatives to determine next day's projections (information may come in through ATL).
 - (4) Meet with ATL, IWO, etc., to determine if anything needs to be changed (this may not be needed each day).
 - (5) Be available for any questions, comments, thoughts, theories, etc. That operational people may have.
 - (6) Examine seed inspection cards.

- (7) Make sure that all information is available to field personnel.
- (8) Make up information board in office to inform personnel of on-going events.
- (9) Make sure vehicles are ready for the next day.
- (10) Make sure everyone is in from the field, everyone has knowledge of the next day's activities and everyone has posted their time for the day.

Application Equipment Manager - at heliport

- (1) Notify headquarters that seeding has stopped for the day, what blocks were seeded, and acres/blocks treated.
- (2) Communicate with the Project Manager/Ops chief to determine priorities for next day.
- (3) Notify ground inspectors that seeding is finished for the day.
- (4) Meet with contractor's personnel to determine needs for next day.
- (5) Contact Project Manager/Ops chief and advise of needs for next activities.
- (6) Meet with necessary crew members to explain next day's work (heliport, office, or wherever).
- (7) Complete necessary paperwork, gather necessary paperwork from field personnel and file appropriately.
- (8) Post next day's projected work scheduled at office.
- (9) Read information board in office.
- (10) Make sure vehicles, etc. are ready for next day.
- (11) Make sure Ops chief has knowledge of the following day's activities for each person.
- (12) Make sure everyone has posted their time for the day.
- (13) Assure contractor updates work progress map.

c. Ground Inspectors (in field and office)

- (1) Communicate with Application Equipment Manager on blocks partially or wholly completed to determine time of pick-up.

- (2) Pick up any seed inspection cards.
 - (3) Deliver cards to Application Equipment Manager.
 - (4) Indicate on appropriate map in office the location of the seed inspection card plots.
 - (5) Get instructions from Application Equipment Manager on areas to be seeded the following day.
 - (6) Know where your card plots will be for the next day.
 - (7) Read information board in office.
 - (8) Make sure vehicles are ready for the next day.
- d. Warehouse (office and in field).
- (1) Ready seed mix for projected next day activity (based on ATL's projection).
 - (2) Record seed mix that goes out
 - a. by the pound
 - b. by specific fire
 - c. by the block

The following standards are to be used by all application Team Leaders to determine when seeding operations should be suspended. Any variations of these standards, must be approved by the Project Manager/Ops chief.

STANDARDS

While it is important to the overall success of the 1992 Boise Rehabilitation Project that every Application Team follow the standards for when to seed or not to seed, it needs to be emphasized that many of these standards will require a large amount of professional judgement before a decision can be made. The goal of these standards is to set up the stage so that the same criteria are being used by everyone to make up a go or no go decision.

1. Weather

Moisture, wind, and air turbulence (thermal updrafts, etc.) are all important factors that affect proper seed dispersal and placement.

- a. Wind - Maximum allowable wind speed is eight (8) mph. No seeding should be attempted or all seeding should cease if wind speeds exceed this limit within the treatment blocks.

- b. Personnel

Suspend seeding activities if the following personnel are not present:

- (1) Seed application pilot
- (2) Application Equipment Manager

B. Moisture

(1) Fog - No seeding should occur when fog or low clouds cover the area to be seeded. This is a potentially dangerous situation. Under these conditions, visual inspection is inadequate.

(2) Rain - No seeding will take place if it is raining (same conditions exist as stated in fog).

C. Air Turbulence

If the surface temperature rises faster than the seeding altitude temperature, an updraft will occur causing the lighter seed to rise and move off-target. This phenomenon is especially evident on southern exposures and dark terrain features early in the morning. If this condition exists, and affects proper seed distribution and rate, stop seeding in the area and, if possible, move to another portion of the block.

2. Improper Seed Rates and Dispersal

a. Rate of Spread

(1) If desired spread rates are not being obtained, a problem exists and should be corrected immediately.

(2) Seed dispersal - The goal is to get the desired number of (see exhibit 1) seed per square foot. Weather conditions will usually be the cause of this problem if there are too few seeds per square foot. There could also be a mechanical problem with the seed bucket. Stop seeding if this condition exists.

3. Mechanical conditions

a. Aircraft

Suspend seeding activities if any of the following conditions exists:

(1) Mechanical problems

(2) Seed bucket malfunction.

(3) Darkness (prevents adequate control of spreading patterns).

(4) When avionics are not operating properly.

(5) Flying conditions are beyond the capabilities of the pilot or the aircraft.

DEMOBILIZATION PLAN

I. 1992 BOISE REHABILITATION PROJECT

A. POST SEEDING

1. Debrief all project personnel and ensure that performance of all project personnel is reviewed and recorded.
2. Compile permanent project records and maps for transfer to Boise National Forest. Included will be:
 - a. Daily seed reports
 - b. Data base reports
 - c. Weather reports
 - d. Map and aerial photos
 - e. Intelligence files
 - (1) Land ownership information and letters of consent (on Soil Conservation land responsibility).
 - (2) Field weather reports.
 - (3) Expenditures
 - (4) Aircraft records
 - (5) Helipport records
 - (6) Operations plan
 - f. Example of forms developed for the project
3. Ensure that all borrowed and rented equipment is returned and that all agreements for services are in proper order. Included will be:
 - a. Inventory computer hardware and office machineery and return to proper locations.
 - b. Ensure all persons hired for temporary duties have been compensated.
 - c. Other items as developed in the Project and Unit Demobilization Plan.
4. Write letters of appreciation to people, organizations, and businesses who helped and cooperated with the project.
5. A formal critique will occur prior to departure of project personnel.

CALIBRATION FORMULAS

STEP NO. 1. DETERMINE EFFECTIVE SWATH WIDTH FOR EACH AIRCRAFT AND EACH MIX TO BE USED FOR THAT INDIVIDUAL AIRCRAFT.

ALSO DETERMINE EFFECTIVE SWATH WIDTH AT 75 FEET AND 100 FEET ABOVE GROUND LEVEL. THIS IS DUE TO VARYING TREE HEIGHTS AND TO MAINTAIN A SAFE DISTANCE ABOVE FOREST CANOPY.

FLIGHT SPEED SHOULD BE CHECKED WITH RADAR GUN AT 45 MILES PER HOUR. (FOR SMALL HELICOPTERS).

FORMULA 1. ACRES/MINUTE: MILES/HR X SWADTH WIDTH X 002 - ACRES/MINUTE

FORMULA 2. LBS/MINUTE: ACRES/MINUTE X LBS/ACRE - LBS/MINUTE

FORMULA 3 LBS/SECOND: LBS/MINUTE - 60 SEC. - LBS/SECOND

FORMULA 4 DISCHARGE/LOAD: LBS/IN BUCKET LBS/MINUTE-MINUTES TO DISCHARGE

EXAMPLE 1. 45 MPH X 35' SWATH WIDTH X 002 - 3.15 AC/MINUTE

2. 3.15 AC/MIN X 23 LBS/ACRE - 72.45 LBS/MINUTE

3.400 LBS IN BUCKET-72.45 LBS/MIN-5.52 MINUTES TO DISCHARGE.

REFER TO OPERATIONS PLAN ON CHARACTERIZATION AND CALIBRATION ON WHAT FACTORS INFLUENCE THE RATE OF SPREAD AND HOW TO MONITOR OR CORRECT THEM.

THIS IS A FORM OF CHECKING THE DISCHARGE RATE AND RATE OF SPREAD. HOWEVER THE FINAL CHECK IS TO COMPARE THE DISCHARGE RATE OF THE NUMBER OF POUNDS SATISFACTORILY APPLIED USING THE CONTRACTORS MEASURING SCALES AGAINST THE CERTIFIED WEIGHT OF SEED THAT WAS DELIVERED TO THE CONTRACTOR. IT IS IMPORTANT TO MONITOR THIS CLOSELY WITH EACH DELIVERED LOAD TO ENSURE COMPLIANCE WITH SATISFACTORY APPLICATION AND FINAL PAYMENT.

JOB DESCRIPTIONS

AERIAL SEEDING PROJECT MANAGER

GENERAL RESPONSIBILITIES: The aerial seeding project manager is directly responsible to the Incident Commander for planning, organization, directing and controlling all aspects of aerial seeding operations on the Foothills, Dunnigan Creek, and Grouse Creek Fires on the Boise National Forest.

DUTIES

1. Prior to the start of the project, the Project Manager will be responsible for the following:
 - a. Prepare a project operations plan.
 - b. Develop the necessary organization to successfully complete the project and recruit required personnel.
 - c. Assure that all project personnel are adequately qualified and trained for the jobs they are to perform.
 - d. Maintain good relations with other agencies, landowners, and the general public.
 - e. Supervise all pre-work activities and assure preparation is adequate to ensure project success.
 - f. Keep Incident Commander informed of progress, problems, and developments.
 - g. Prepare and submit required reports.

During the project, the project manager will:

- a. Coordinate and supervise all project activities and assure that all plans and instructions are being followed and implemented.
- b. Conduct strategy and planning meetings as appropriate.
- c. Check on and, if necessary, initiate action for the welfare and safety of all personnel.
- d. Take required action on all cases of personnel deficiency.
- e. Maintain good public relations between other agencies, landowners, contractors, suppliers, and the general public.
- f. Keep the Incident Commander informed of progress, problems and other developments.
- g. Prepare and submit required reports.
- h. Determine when demobilization should start and assure the demobilization plan is properly implemented.
- i. Conduct a project critique prior to dismissal of personnel.
- j. Monitor project expenditures for budget accountability.

KNOWLEDGE, SKILLS AND ABILITIES

1. Ability to manage a complex organization under stressful conditons including: Planning, budgeting, organizing, evaluating, staffing, and directing recources in order to meet project objectives.
2. Ability to supervise effectively.
3. Knowledge of project goals and objectives.
4. Knowledge of basic watershed rehabilitation techniques, aerial seeding operations, contract preparation and administration, seed procurement and testing, and other technical knowledge related to the project.
5. Ability to develop and maintain working relationships with other government, landowners, permittees, contractors, and the general public.
6. Ability to communicate effectively both orally and in writing.

OPERATIONS CHIEF

GENERAL RESPONSIBILITIES: Responsible to the Aerial Seeding Project leader for the planning and implementation of all Aerial Seeding operations. The Operations Chief plans, coordinates, administers and supervises all phases of Aerial Seeding application work operations.

Duties

1. Provides assistance to the Aerial Seeding Manager during project planning, including layout of treatment blocks, location and selection of helispots, recruitment of personnel, and preparation of operations plans.
2. Takes lead in organizing pre-project inspection of aircraft and calibration of seed delivery systems.
3. Assist in selection, and training all personnel assigned to the aerial seeding operation.
4. Work closely and harmoniously with all State and Federal agencies concerned with the project.
5. Conduct an efficient, effective and safe project at a reasonable cost with full consideration to protecting associated resources.
6. Assumes responsibility for all seed operations in assigned areas including:
 - a) Providing instructions and training of unit personnel and assigning individual work responsibilities.
 - b) Developing good coordination and cooperation with contractors and other units on the project.
 - c) Enforce FAA and project safety regulations relative to aircraft.
 - d) Maintain progress, record and submit to project manager.
 - e) Assume responsibility for implementation of unit search and rescue plan.
 - f) Prepare daily shift plan and submit to Project Manager and ICP.
7. Develops the seed deposits guidelines, including sampling scheme and seed assessment forms.
 - a) Summarizes daily seed deposit assessment.
8. Serves as Contracting Inspector on seed procurement and seed application contract.
9. Plans and organizes the maps and record section.
 - A) Selects and trains unit personnel.
 - B) Monitors and displays project progress and provides current data.

Knowledge, Skills and Abilities

1. Knowledge of seed application operations.
 - a) Treatment block design.
 - b) Aircraft performance and capabilities.
 - c) Calibration of seeding equipment.
 - d) Meteorology.
 - e) Aircraft safety.
2. Knowledge of Contract Administration.
 - a) Knowledge of contractual requirements.
 - b) Limits of delegated authority.
 - c) Ability to work with contractor.
3. Management skills.
 - a) Knowledge of basic managerial planning and control techniques.
 - b) Supervision skills.
 - c) Ability to plan and work safely.
 - d) Sensitivity to social, political and environmental considerations in operational decisions.
4. Knowledge of Mapping and Reporting Procedures.
 - a) Ability to plan, organize and control the gathering, assimilation and communication of diverse project information.
 - b) Ability to plan for complex situations.
 - c) Knowledge of mapping and drafting techniques.
 - d) Knowledge of recordkeeping, reporting and data storage.

ASSISTANT AIR OPERATIONS MANAGER

GERERAL RESPONSIBILITIES: Responsible to the Project Leader for the planning and implementation of all seed operations. The Assistant Air Operations Manager plans, coordinates, administers and supervises all phases of application work.

Duties

1. Provides assistance to the project leader in project planning, including layout of treatment blocks, location and selection of helispots, recruitment of personnel, and preparation of operations plans.
2. Plan, organize and supervise the North Zone field operations.
3. Select and train operations personnel.
4. Work closely and harmiously with all State and Federal agencies concerned with the project.
5. Conduct an efficent, effective and safe project at a reasonable cost with full consideration to protecting associated recources.
6. Assumes responsibility for all seed operations in assigned areas including:
 - a) Providing instructions and training of unit personnel or individual work responsibilities.
 - b) Developing good coordination and cooperation with contractors and other units on the project.
 - c) Enforce FAA and project safety regulations relative to aircraft.
 - d) Maintain progress record and submit to project headquarters daily.
 - e) Assume responsibility for implementation of unit search and rescue plan.
7. Develops the seed deposit guidelines, including sampling scheme and seed assesment forms.
 - a) Summarizes daily seed deposit assessment.
8. Serves as Contracting Officer's Representative on seed procurement, seed mixing and seed application contract.
9. Plans and organizes the maps and record section.
 - a) Selects and trains unit personnel.
 - b) Monitors and displays project progress and provide current data.
10. In the absence of the Air Operations Manager, assumes all his duties and responsibilities.

APPLICATION EQUIPMENT MANAGER

GENERAL RESPONSIBILITIES: Responsible for the day-to-day operation of one application team consisting of one seed application helicopter, logistical support personnel and contract inspection personnel. Responsible to the Operations chief for operational activities and to the Project Manager concerning administration. Responsible for safe and efficient heliport operations including aircraft, aircraft support logistics and seed logistics.

Duties

1. Plans and coordinates the daily activities of all parts of the application team, inspector/weather observer, and coordinates with contractor's on-site representative.
2. Serves as Contract Inspector for administration of aerial seeding application contract.
3. Advises and assists Operations Chief in planning seedblock treatment sequence.
4. Collect, process and act on information provided by ground inspector/weather observer.
5. Responsible for safe operations of assigned personnel and equipment on unit.
6. Supervises loading of seed and maintains records by fire, block number and seed mix.
 - a. Train and supervise inspectors/weather observers.
 - b. Assure loads do not exceed weight limits.
 - c. Observe loading area practices and correct unsafe procedures.
 - d. Briefs seed application pilot on block boundaries, flight patterns, critical areas and logistics support before seeding commences each day.
7. Maintain records of takeoff and landing times of all aircraft using the helispot. When changing helispots advise ICP
8. Report immediately any helicopter that is overdue to ICP and Operations Chief.
9. Observe landings and takeoffs for conformance to prescribed safety procedures.

INSPECTOR/WEATHER OBSERVER

GENERAL RESPONSIBILITIES: Inspector/Weather observers are responsible to the Application Equipment Manager for collection of necessary weather data on seed treatment blocks and for assuring adequate coverage in each seed block. They will assist the Application Equipment Manager by providing feedback on the quality of the seed application.

Duties

- I. Assist Application Equipment Manager by:
 - A. Giving preliminary weather data prior to sunrise.
 - B. Give current weather conditions during seeding application.
 - C. Report seed distribution.
- II. Be responsible for all aspects of seed inspection cards including
 - A. Location in seed treatment blocks:
 1. Selects card location.
 - a. obtain landowners permission.
 - b. Insure site is well inside correct treatment block boundary.
 2. Plots card location on records map for treatment verification.
 3. Keep card location information within seed assessment team members until after treatment.
 - B. Card installation
 1. Selects card sites ahead of time.
 2. Insures cards are in good locations.
 - a. Cards are not under trees.
 - b. In location that the cards are readily visable from the air.
 - c. Where grazing animals cannot disturb them.
 - C. Card identification and processing.
 1. Label all seed inspection cards.
 2. Collect cards after treatment, putting cards into boxes (carrying).
- III. Seed inspection and processing.
 - A. Measure rate of spread and seed distribution.
 1. Seeds per Sq. ft.
 2. Coverage on all cards.
 - B. Record on appropriate forms.
 - C. Insure prompt return and notification to the AEM of cards that are less than adequate.

CARTOGRAPHER

GENERAL RESPONSIBILITIES: The Cartographer is responsible to the Project Manager and Operations Chief for completion of project mapping, assists in drafting seed block maps ,transportation maps and completes other mapping as needed. Assists in documenting project progress information. Helps to develop and maintain filing system for project.

Duties

1. Drafts seed blocks on aerial photo base.
2. Computes acreages using plan, meter.
3. Reproduces project maps as needed.
4. Develops seed block acres/pounds data table.

Knowledge, skills and Abilities

- A. Ability to drive safely in rough terrain.
- B. Ability to work with a wide variety of individuals.
- C. Ability to write clearly.
- D. Ability to communicate verbally.
- E. Knowledge of seed application activities.
- F. Familiar with seed treatment blocks.
- G. Knowledge of basic weather measurements and meteorology.
- H. Skill at navigating with a map and aerial photo.

LOGISTIC INSPECTOR

GENERAL RESPONSIBILITIES: Recieves and stores mixed seed required to aerial seed fire areas on the Boise National Forest. Monitors the mixing and delivery of mixed seed (bag or bulk) at the designated storage sites.

Duties

1. Tracks and organizes all seed delivery from seed mixing contractor documenting:
 - a. Amounts by pounds of mixed seed
 - b. Mix number and contents
 - c. Seed disposition (bag or bulk)
2. Take seed mix samples as required by COR.
3. Monitor all mixing.
4. Assist Application Team Leaders in field inspection when situations warrant.

AIRCRAFT CALIBRATION SHEET

Aircraft "N" Number N Date

Aircraft Type Pilot Name

Aircraft Model Contractor

Aircraft Speed Seed Mix

Swath Width Acres Per Minute

Pounds per Acre Pounds per Minute

Helicopter Equipped Weight

Maximum Allowable Payload by Elevation: Alt. Pounds

Alt. Pounds Alt. Pounds

Comments on Calibration and Characterization:

INCIDENT RADIO COMMUNICATIONS PLAN

1. INCIDENT NAME
Foothills
Rehab

2. DATE/TIME
PREPARED
10/19

3. OPERATIONAL PERIOD
DATE/TIME
Daily

4. BASIC RADIO CHANNEL UTILIZATION

SYSTEM/CACHE	CHANNEL	FUNCTION	FREQ/CH/TORE	ASSIGNMENT	REMARKS
BIFC King	1	Command-North	TX: 170.430 RX: 168.100	Field - to - ICS - 40 - Hickman	These freq. assignments are for use on <u>Aerial</u> <u>Seeding</u> <u>project</u> .
BIFC King	2	Command-South	TX: 170.425	" " "	
BIFC King	3	Weather	RX only 162.550	NOA-A	
BIFC King	4	TAC 4	166.725	For use as Assigned daily	
BIFC King	5	TAC 5	166.775	For use as Assigned daily	
BIFC King	6	TAC 6	168.250	For use as Assigned daily	
VICTOR	/	Flight Following	135.975	Air Operations	Do not clone these radios to other project radios.
VICTOR	/	Air-to-Air	118.950	Air-to-Air	
BIFC King	7	Boise N.F. Thornick Repetec	TX: 165.4125 RX: 172.200	Boise National - Disputada	
BIFC King	8	Boise N.F. Grape Mt. Repetec	TX: 165.4125 RX: 172.200	" " "	
BIFC King	9	Boise N.F. Dog Mt. Repetec	TX: 165.4125 RX: 172.200	" " "	
BIFC King	14	Air Guard	168.625	Emergency Ground To HRA only!!	

REAL ESTATE INSURANCE

587-4471

AT CITY HALL:
Elevation: 3181 Ft.
Latitude: 43°08'15"
Longitude: 115°42'09"

ZIP CODE
83647

ELMORE COUNTY

Map of MOUNTAIN HOME

IDAHO

SCALE 0 1/4 1/2 MILE

Mountain Home Municipal Airport

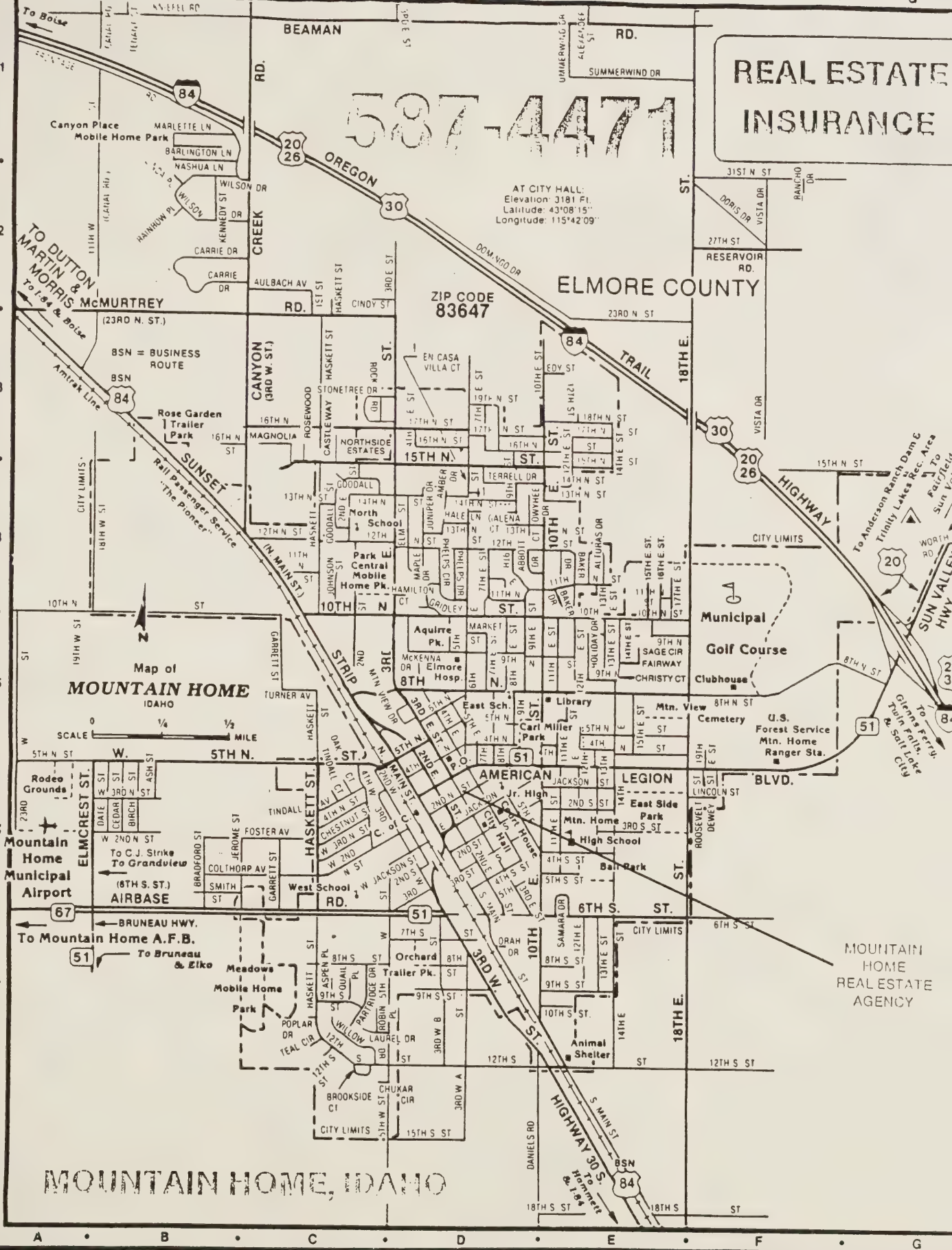
AIRBASE

AMERICAN

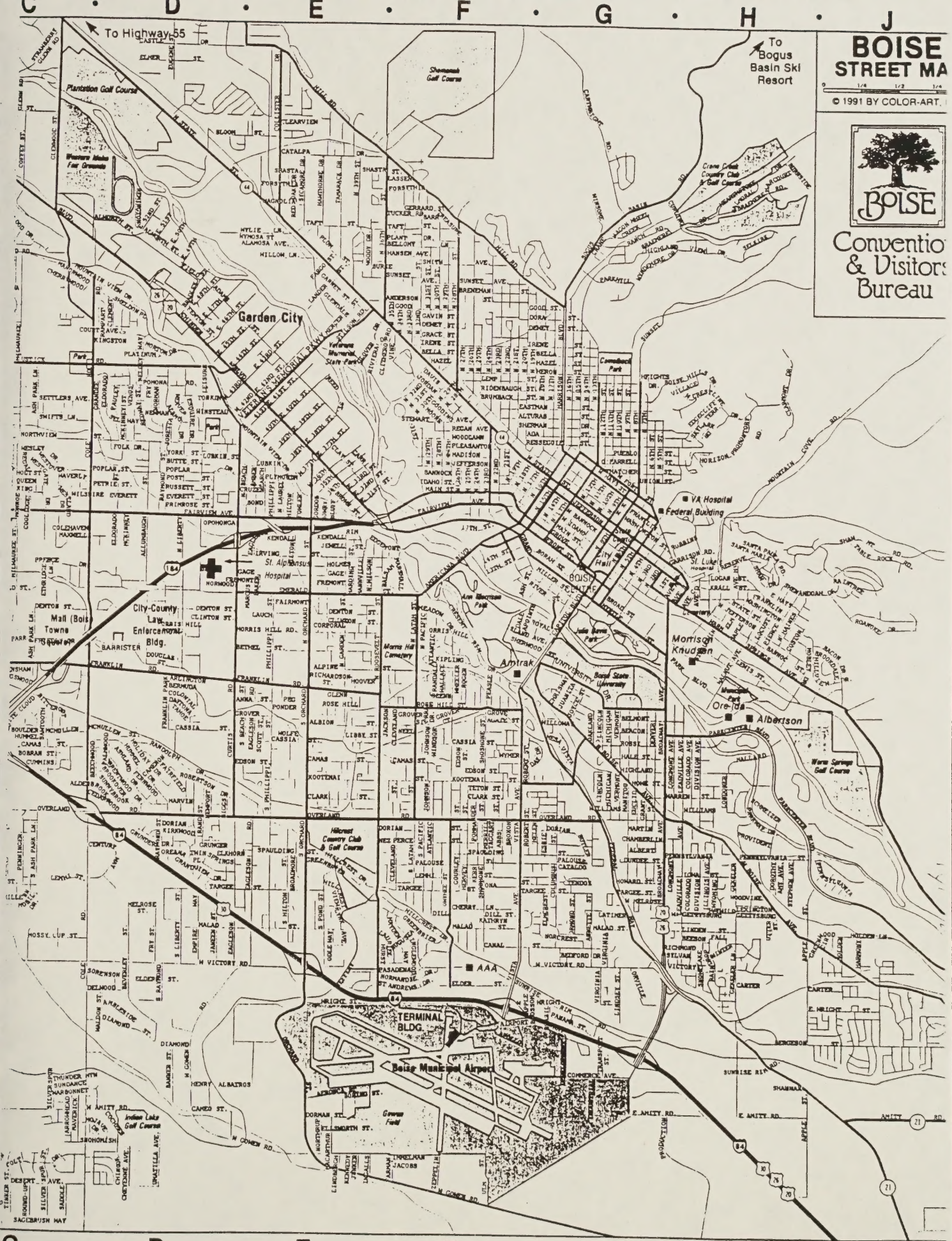
LEGION

MOUNTAIN HOME
REAL ESTATE
AGENCY

MOUNTAIN HOME, IDAHO



C D E F G H J



BOISE STREET MAP

© 1991 BY COLOR-ART, INC.



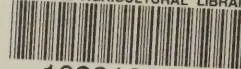
Convention
& Visitors
Bureau

To
Bogus
Basin Ski
Resort

To Highway 55

C D E F G H J

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